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09/736,049	12/13/2000	Robert P. Collette	80012RRS	6591

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Patent Legal Staff
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EXAMINER	
EBRAHIMI DEHKORDY, SAEID	
ART UNIT	**PAPER NUMBER**
2626	3

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/736,049	COLLETTE ET AL.	
	Examiner	Art Unit	
	Saeid Ebrahimi-dehKordy	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-39 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-39 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 13 December 2000 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-18 and 21-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (U.S. patent 6,710,796) in view of Li et al (U.S. patent 6,431,679)

Regarding claim 1 Miyazaki et al disclose: A proofing head assembly comprising: a) a color light analyzer (please note Fig.11 and 12 item 61 the light emitting element array which acts as the light analyzer, column 11 lines 23-27) b) a color printhead (please note Fig.12 item 60 the print head, column 11 lines 21-23) and c) a housing joining the printhead to the color light analyzer (please note Fig.12 items 60 and 61 which are housed in the print head 60, column 11 lines 21-35) However Miyazaki et al does not disclose: directing the printhead and color light analyzer at a media plane. On the other hand Li et al disclose: directing the printhead and color light analyzer at a media plane (please note Fig.2, column 4 lines 54-64).

Therefore it would have been obvious to a person of ordinary skill in art at the time of the invention to modify Miyazaki et al's invention according to the teaching of Li et al, where Li et al in the same field of endeavor teach the way printhead and color analyzer meet the media plan for purpose of optimizing and fastening the process of printing.

Regarding claim 2 and 22 Li et al disclose: The proofing head assembly of claim 1 further comprising: a) a controller to operate the color light analyzer to make color measurements of an image and to instruct the printhead to render images on a receiver media (please note Fig.2 column 4 lines 65-67 and column 5 lines 1-8).

Regarding claim 3 and 23 Li et al disclose: The proofing head assembly of claim 2 wherein said controller calculates color adjustments using color measurement data from said color light analyzer and adjusts the colors printed by the printhead (please note column 8 lines 14-26).

Regarding claim 4 and 24 Li et al disclose: A proofing head assembly as claimed in claim 3, wherein said controller adjusts the printing instructions transmitted to the printhead to match the visual appearance of an image printed by the printhead to the appearance of the same image as printed by another printer (please note column 3 lines 49-67).

Regarding claim 5 and 25 Li et al disclose: A proofing head assembly as claimed in claim 3, wherein said controller calculates color adjustments by comparing color data measured from a printed image to baseline color data (please note column 6 lines 44-59).

Regarding claim 6 and 26 Li et al disclose: A proofing head assembly as claimed in claim 5, wherein said controller instructs the printhead to print a color having known image code values and said color light analyzer to measure the color printed by the printhead while the image is printing (please note column 4 lines 28-39).

Regarding claim 7 and 27 Li et al disclose: A proofing head assembly as claimed in claim 2 wherein said controller uses said color light analyzer to measure the colors printed by the printhead on a receiver media to verify that the colors printed on the media visually match the instructions sent to the printhead (please note column 8 lines 14-26).

Regarding claim 8 and 28 Li et al disclose: A proofing head assembly as claimed in claim 2 wherein said controller compares the color data measured from an image during the printing of an image to the colors that the printhead was instructed to render and provides a signal if the comparison indicates that the colors do not match (please note column 7 lines 33-48).

Regarding claim 9 and 29 Li et al disclose: A proofing head assembly as claimed in claim 3, wherein said controller adjusts the operation of the printhead during printing operations to cause the colors in the printed image to conform to the colors that the printhead was instructed to print (please note column 4 lines 1-6).

Regarding claim 10 and 30 Li et al disclose: A proofing head assembly as claimed in claim 2, wherein said controller receives data representing an image to be printed and converts this data into printing instructions for the printhead that are modified in accordance with color calibration and characterization adjustments (please note column 8 lines 62-67 and column 9 lines 1-10).

Regarding claim 11 and 31 Li et al disclose: A proofing head assembly as claimed in claim 10, wherein said controller further comprises a color calibrator to compare the color values measured from a test image printed by the printhead to known

color values associated with the test image and to determine calibration adjustments based on this comparison (please note column 7 lines 33-48).

Regarding claim 12 and 32 Li et al disclose: A proofing head assembly as claimed in claim 11, wherein said controller further comprises a color processor to compare the color values measured from a test image; printed by another device to known color values associated with the test image and to determine characterization adjustments based on this comparison (please note column 4 lines 1-6).

Regarding claim 13 and 33 Li et al disclose: A proofing head assembly as claimed in claim 10, wherein said controller further comprises a color calibrator to receive color measurement data from the light analyzer at particular locations on a calibration test image printed by the printhead and to calculate calibration adjustments by comparing the color values measured at a particular location of a test image printed by the printhead to known color values associated with that location on the test image (please note column 7 lines 60-67 and column 8 lines 1-3).

Regarding claim 14 and 34 Li et al disclose: A proofing head assembly as claimed in claim 5, wherein said controller further comprises a color processor to receive color measurement data from the light analyzer at particular locations on a characterization test image printed by another device and to calculate characterization adjustments by comparing the color values measured at a particular location of a test image printed by another device to known color values associated with that location on the test image (please note column 6 lines 44-59).

Regarding claim 15 Miyazaki et al disclose: The print head of claim 1 wherein said housing comprises a closed frame (please note Fig.12 item60 and 61).

Regarding claim 16 Miyazaki et al disclose: The proofing head of claim 15 wherein said housing has an interior chamber to contain the printhead and the color light analyzer and further comprises an opening to permit ink from the printhead to pass to the outside of the housing and to further permit light to pass to the color light analyzer (please note column 11 lines 21-35).

Regarding claim 17 Li et al disclose: The proofing head of claims 2 - 14 wherein said housing defines a cavity for containing said printhead, said controller, and said color light analyzer, and said cavity defines an opening to permit ink to pass from the printhead onto a media and said cavity further permits light to pass between the color light analyzer and the media (please note column 4 lines 28-49).

Regarding claim 18 Miyazaki et al disclose: The printhead of claim 15, wherein said housing rigidly joins said color light analyzer and said color printhead (please note Fig.20 and 21, column 12 lines 47-56).

Regarding claim 21 Miyazaki et al disclose: A proofing printer assembly for proofing an encoded image said proofing printer comprising: a proofing head having a color light analyzer and a color printhead joined by a housing that directs the printhead and color light analyzer at a media (please note Fig.12 items 60 and 61 which are housed in the print head 60, column 11 lines 21-35 and also note Fig.30, column 13 lines 40-55) However Miyazaki et al do not disclose: a translation mechanism to arrange the proofing head assembly relative to the surface of a media a media advance to

position the media relative to the proofing head assembly and a controller to operate the proofing head assembly, the translation mechanism and the media advance . On the other hand Li et al disclose: a translation mechanism to arrange the proofing head assembly relative to the surface of a media (please note column 4 lines 30-36) a media advance to position the media relative to the proofing head assembly and (please note Li et al Fig.1 item 125 column 4 lines 42-43) a controller to operate the proofing head assembly, the translation mechanism and the media advance (please note Fig.1 of Li et al, items 110 the controller, 135 print head assembly, 125 the media transport device, column 4 lines 40-53).

Therefore it would have been obvious to a person of ordinary skill in art at the time of the invention to modify Miyazaki et al 's invention according to the teaching of Li et al, where Li et al in the same filed of endeavor teach the way the print head assembly is interacting with the media transport device for purpose of enabling the printing system of alleviating any variance in ink drop volume and the resulting shift in print contrast.

Regarding claim 35 Li et al disclose: A proofing printer assembly as claimed in claim 34 wherein said controller further comprises a memory for storing more than one set of characterization adjustments and selectively applies the set of characterization adjustments associated with a particular printer (please note column 3 lines 49-67).

Regarding claim 36 Li et al disclose: A proofing printer assembly as claimed in claim 22 wherein said controller causes the proofer to render a test image, obtain color measurement data from the test image, and calculate calibration adjustments in

response to a single command from the user (please note column 5 lines 61-67 and column 6 lines 1-14).

Regarding claim 37 Li et al disclose: A proofing printer assembly as claimed in claim 22 or 36 wherein said controller causes the proofer to obtain color measurement data from a characterization test image and calculate characterization adjustments in response to a single command from the user (please note column 2 lines 20-46).

Regarding claim 38 Li et al disclose: A proofing printer as claimed in claims 22 - 36 wherein said controller is contained in said housing (please note Fig.1 item 110 column 4 lines 40-44).

Regarding claim 39 Li et al disclose: A proofing printer assembly as claimed in claims 1 wherein said color light analyzer comprises a spectrophotometer (please note Fig.10 item 1040).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al (U.S. patent 6,431,679).

Regarding claim 19 Li et al disclose: A proofing head assembly comprising: a) a spectrophotometer (please note Fig.10 item 1040, column 8 lines 14-17)

b) a color printhead (please note Fig.8, column 7 lines 33-38) and c) a controller (please note Fig.1 item 110 the controller 110, column 4 lines 12-16) wherein said spectrophotometer said color printhead and said controller are joined to form an integral assembly (please note Fig.1, column 4 lines 40-54).

Regarding claim 20 Li et al disclose: The proofing head assembly of claim 19 wherein said printhead said controller and said spectrophotometer are rigidly joined to form an integral assembly (please note Fig.1, column 4 lines 12-54).

Contact Information

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Saeid Ebrahimi-Dehkordy* whose telephone number is (703) 306-3487.

The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams, can be reached at (703) 305-4863.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

Or faxed to:

(703) 872-9306, or (703) 308-9052 (for ***formal*** communications; please mark
"EXPEDITED PROCEDURE")

Or:

(703) 306-5406 (for ***informal*** or ***draft*** communications, please label "PROPOSED" or "DRAFT")

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 305-4750.

Saeid Ebrahimi-Dehkordy
Patent Examiner
Group Art Unit 2626
September 30 2004

KAWilliams

KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER